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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/624,224	07/24/2000	Norishige Kakuno	Q60222	5390
7590 08/26/2004 Sughrue Mion Zinn MacPeak & Seas PLLC 2100 Pennsylvania Avenue N W Washington, DC 20037-3202			EXAMINER PHAM, THIERRY L	
			ART UNIT 2624	PAPER NUMBER

DATE MAILED: 08/26/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/624,224	KAKUNO, NORISHIGE	
	Examiner	Art Unit	
	Thierry L Pham	2624	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 29 June 2004.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-20 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

1. This action is responsive to the following communication: an Amendment filed on 6/29/04.

Claim Rejections - 35 USC § 102

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

3. Claims 17-20 are rejected under 35 U.S.C. 102(b) as being anticipated by Suzuki et al (EP 820004).

Regarding claim 17, Suzuki further discloses a printing method to be used in a printer system combining a printer device and a data processing device, comprising:

- (1) a determination step (language interpret part (Fig. 4) within the controller of Fig. 1, col. 7, lines 53-59 to col. 8, lines 1-10) for determining the type of language of input print data, selecting an intermediate code generating means (GRM, Fig. 4, col. 8, lines 5-25) on the basis of the determination result, and delivering said print data to said selected intermediate code generating means, in said printer device (intermediate code convert part, Fig. 4, col. 8, lines 5-25); and
- (2) an intermediate code generating step (intermediate code convert part, Fig. 4, col. 7, lines 53-59 to col. 8, lines 1-5) for generating the intermediate code compatible with the print data by performing language analysis (language interpret part, fig. 4) of print data, and outputting the intermediate code identification information, in an intermediate code generating means of said printer device or an intermediate code generating means of said data processing device; and
- (3) a print control step (controller of printer, Fig. 1) for selecting an intermediate code rasterizing means (GRM, Fig. 4, col. 8, lines 5-25) on the basis of intermediate code identification information input from the intermediate code generating means, controlling print image (controller of printer, Fig. 1) information rasterized by said selected intermediate code rasterizing

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means to be stored in a prescribed storage area of said printer device, and printing (printer, fig. 1) on the basis of said stored print image information, in said printer device.

Regarding claim 18, Suzuki further discloses a printing method according to Claim 17 using the data processing device comprising the intermediate code generating means (intermediate code convert part, Fig. 4, col. 7, lines 53-59 to col. 8, lines 1-5), wherein the intermediate code of said data processing device is capable of analyzing the print data described in a language not corresponding (apparently, PDL languages are not the same as intermediate code languages, Fig. 1, col. 12, lines 27-49) to the intermediate code generating means of said printer device.

Regarding claim 19, Suzuki further discloses a printing method according to Claim 17, wherein said print control step selects (controller of printer, Fig. 1) an intermediate code rasterizing means (GRM, Fig. 4, col. 8, lines 5-25) with reference to the corresponding relation between intermediate code identification information and the intermediate code rasterizing means.

Regarding claim 20, Suzuki further discloses a computer readable medium storage medium (memory, fig. 2) storing a program for making a computer executable the printing method according to anyone of claims 17-19.

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Suzuki et al (EP 820004), and in view of Parker et al (U.S. 6441919).

Regarding claims 1-2, Suzuki discloses a printing system (fig. 1) comprising:

- (1) a host (host computer, fig. 1) operable to output print data compatible with at least one of a plurality of different printer languages (PDL and intermediate codes, abstract and col. 2, lines 10-67 and col. 6, lines 1-7);
- (2) a data processing device comprising: (a) a plurality of intermediate code generators (selecting from a plurality of intermediate code generators to generate intermediate code, col. 2, lines 10-67 and col. 4, lines 24-40), at least one being operable to generate intermediate code compatible with the print data by performing language analysis (language interpreter, fig. 4, col. 7, lines 53-67) of the print data; and
- (3) printer (printer, fig. 1) comprising printing means for controlling the print image information rasterized by the intermediate code rasterizing means (conversion means for converting intermediate codes to bit image data, col. 2, lines 10-27) to be stored in a prescribed storage area (image buffer, fig. 1, col. 5, lines 35-47) of said printer, and printing on the basis of said stored print image information.

However, Suzuki does not explicitly disclose wherein a data processing device comprising plurality of intermediate code rasterizing means for respectively rasterizing the generated code into print image information.

Parker, in the same field of endeavor for printing, teaches a data processing device comprising plurality of intermediate code rasterizing means (plurality of rasterizer compositors, figs. 1-3, abstract and col. 2, lines 30-45 and col. 3, lines 20-35) for respectively rasterizing the generated code into print image information.

It would have been obvious to one of ordinary skill in the art at the time of the invention was made to modify Suzuki as per teachings of Parker because of a following reason: (1) enabling high-speed printing (Suzuki, col. 2, lines 38-40).

Therefore, it would have been obvious to combine Suzuki with Parker to obtain the invention as specified in claims 1-2.

Regarding claim 3, Suzuki further discloses a printer system according to Claim 2, wherein said printer device further comprises determination means (language interpret part (Fig. 4) within the controller of Fig. 1, col. 7, lines 53-59 to col. 8, lines 1-10) for determining which of the plurality of different printer languages (PDL and intermediate codes, abstract and co. 2, lines 10-67 and col. 6, lines 1-7) input print data, selecting an intermediate code generating means (GRM, Fig. 4, col. 8, lines 5-25) on the basis of the determination result, and delivering said print data to said selected intermediate code generating means (intermediate code convert part, Fig. 4, col. 8, lines 5-25).

Regarding claim 4, Suzuki further discloses a printer system according to any one of Claims 1 to 3, wherein said intermediate code generating means generates an intermediate code as well as outputs identification information (Intermediate Code includes identification number, col. 4, lines 50-60 to col. 5, lines 1-10) of the intermediate code to said printing means, and wherein said printing means selects (controller of printer, Fig. 1) an intermediate code rasterizing means on the basis of intermediate code identification information input from the intermediate code generating means, and controls print image information rasterized by said selected intermediate code rasterizing means stored in a prescribed storage area of said printer device.

Regarding claim 5, Suzuki further discloses a printing system according to Claim 4, wherein said printer stores the corresponding relation (identification numbers of characters and bit images appear in the same band, col. 5, lines 1-10) between intermediate code identification information and the intermediate code rasterizing means, and selects an intermediate code rasterizing means with reference to the corresponding relation.

Regarding claim 6, Suzuki further discloses a printing system according to Claim 4, wherein said intermediate code identification information includes address information (band numbers declaration, Fig. 3 (a-e), col. 7, lines 2-30) for calling the corresponding intermediate code rasterizing means.

Regarding claim 7, Suzuki further discloses A printing system according to Claim 4, wherein said intermediate code generator further outputs information of bandwidth and bandheight (intermediate codes include size specifications, col. 5, lines 1-10) compatible with an intermediate code, and wherein said printing means (printer, fig. 1) restructures (bands arrangement, Fig. 3D, col. 9, lines 20-40) said storage (image buffer, Fig. 1) area on the basis of information of bandwidth and bandheight input through the intermediate code generator, and controls said rasterized print image information to be stored in said prescribed storage area restructured in band units (band units, col. 3, lines 7-10).

Regarding claims 8-16, the limitations recited are similar and in the same scope of invention to those recited in claims 1-7; therefore, claims 8-16 will be rejection for the same rationale/basis as described in claims 1-7 above.

Response to Arguments

5. Applicant's arguments filed 6/29/04 have been fully considered but they are not persuasive.

Regarding claims 1-20, the applicant argued the prior art does not teach a print system enabling print data written in various printer languages to be printed from any of various printers not otherwise compatible with the particular printer language.

In response: Suzuki explicitly teaches a printer driver for converting plurality of different printer languages (i.e. PDL and IML, abstract and cols. 2-6) into languages that are compatible with the printers (i.e. intermediate codes and raster image data, abstract and cols. 2-6).

In addition, applicant also argued the prior art does not teach the recited plurality of intermediate code generators.

In response: The examiner will note that applicant is arguing subject matter not previously claimed. However, Suzuki also teaches a method of selecting an appropriate intermediate code generator for generating intermediate code data (col. 2, lines 10-67 and col. 6, lines 1-8).

Conclusion

6. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

(1) U.S. 5671341 to Kashiwazaki et al, discloses an apparatus/method for converting print data into printer language (i.e. PDL, intermediate, and raster code).

(2) E.P. 782067 to Shima, discloses an apparatus/method for converting job language into printer language (PDL, intermediate code).

7. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Thierry L Pham whose telephone number is (703) 305-1897. The examiner can normally be reached on M-F (9:30 AM - 6:00 PM).

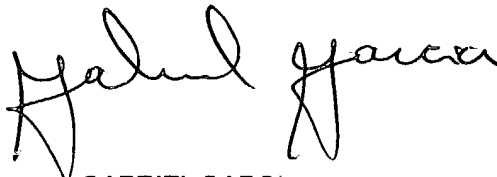
If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David K Moore can be reached on (703)308-7452. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Thierry L. Pham

TP



GABRIEL GARCIA
PRIMARY EXAMINER